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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,768	07/02/2001	Krzysztof Antoni Zaklika	1202.012US1	8221

45346 7590 12/29/2004

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EXAMINER	
CARTER, TIA A	
ART UNIT	**PAPER NUMBER**
2626	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/897,768	ZAKLIKA ET AL.	
	Examiner	Art Unit	
	Tia A Carter	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-29 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 12-28-01.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. (US. 6204940).

Regarding claim 1, Lin et al. discloses a method for correcting a color image comprising:

Averaging at least two color channels in region near the minimum of histograms of the at least two color channels (fig. 3, col. 4, lines 12-15);

Selecting the smallest of the average color values as a black point (fig. 3, col.4, lines 5-60)

Averaging at least two color channels in regions near the maximum of the histograms of the at least two color channels and seeking the largest of the average color values as a white point (fig. 3, col. 4, lines 7-25)

Correcting the at least two color channels by adjusting the smallest and the largest color average to the respectively match the values of the black point and white point to form corrected image data (fig. 3, col. 4, lines 7-44)

Regarding claim 2, Lin et al. discloses the method of claim 1, wherein correcting is done with an imposed clipping limit on the histogram (fig. 1, col. 5,lines 1-13).

Regarding claim 3, Lin et al. disclose the method of claim 2 wherein the clipping limit is imposed on each of the at least two colors so that no more than a predetermine percentage of pixels are identified as black or white pixels (fig, 3, col.4, lines 42-44)

Regarding claim 4, Lin et al. discloses the method of claim 1 wherein regions of the histogram near the minimum color values of histograms for at least two colors are selected based on the darkest non-black pixels in the histogram of the image (fig. 3, col.4, lines 30-44).

Regarding claim 5, Lin et al. discloses the method of claim 1 wherein regions of the histogram near the maximum color values of histograms for at least two colors are

selected based on the lightest non-white pixels in the histogram of the image (fig. 3, col. 4, lines 7-44).

Regarding claim 6, Lin et al. disclose the method of claim1 wherein an original position and final position of smallest color averages and an original and final of largest color averages define two points through which linear interpolation is used to create a look-up table for correcting color data (fig. 4b, col. 5, lines 14-25 and col. 6, lines 25-40).

Regarding claim 7, Lin et al. discloses the method of claim 6 where conceptual movement of smallest color averages in the histogram is equal to the smaller of that required to achieve alignment with a black point and that required to achieve a predetermined level of clipping and conceptual movement of largest color averages is equal to the smaller of that required to achieve a predetermined level of clipping (fig. 1, col. 5, lines 1-13).

Regarding claim 8, Lin et al. discloses the method of claim 6 wherein smallest color averages are aligned with the black point and largest color averages are aligned with the whit point and the white and black points are conceptually moved towards each other, maintaining the alignment until clipping of all colors is reduced to no more than a predetermined amount (fig. 1, col. 4,lines 57-67; col. 5, lines 1-12).

Regarding claim 21, Lin et al. discloses the method of claim 1 wherein at least three color channels are averaged in region near the minimum and the maximum color values of the histograms of the at least three color channels 9fig. 3, col. 4,lines 7-25).

Regarding claim 22, Lin et al. discloses the method of claim 21 wherein averages of maximum values and averages of minimum values for all three colors are compared (fig. 3, col. 4, lines 38-57).

Regarding claim 23, Lin et al. discloses the method of claim 22 wherein the largest of the average maximum values of color histograms determines the amount of conceptual movement of the average maximum values for all colors towards the white point (fig. 3, col. 4, lines 58-67).

Regarding claim 24, Lin et al. discloses the method of claim 22 wherein the smallest of the average minimum values of color histograms determines the amount of conceptual movement of the average minimum values for all colors towards the black point (fig. 3, col. 5, lines 1-13).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9-20 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US. 6204940) in view of Gu (US. 5874988).

Regarding claim 9, Lin et al. disclose the method of claim 1.

Lin et al. **do not disclose** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image

Gu **discloses** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image (fig. 34, col. 14, lines 35-49; fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 10, Lin et al. disclose the method of claim 3.

Lin et al. **do not disclose** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image brightness distribution.

Gu **discloses** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image brightness distribution (fig. 34, col. 14, lines 35-49; fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 11, Lin et al. disclose the method of claim 7.

Lin et al. **do not disclose** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image.

Gu **discloses** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image (fig. 34, col. 14, lines 35-49; fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 12, Lin et al. disclose the method of claim 8.

Lin et al. **do not disclose** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image.

Gu **discloses** wherein after adjustment of colors, resulting brightness distribution is replaced by the original image distribution of the image (fig. 34, col. 14, lines 35-49; fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 13, Lin et al. discloses the method of claim 9.

Lin et al. **do not disclose** wherein brightness is computed in a color space in which the brightness approximately matches human perception.

Gu **discloses** wherein brightness is computed in a color space in which the brightness approximately matches human perception (fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 14, Lin et al. discloses the method of claim 10.

Lin et al. **do not disclose** wherein brightness is computed in a color space in which the brightness approximately matches human perception.

Gu **discloses** wherein brightness is computed in a color space in which the brightness approximately matches human perception (fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 15, Lin et al. discloses the method of claim 11.

Lin et al. **do not disclose** wherein brightness is computed in a color space in which the brightness approximately matches human perception.

Gu **discloses** wherein brightness is computed in a color space in which the brightness approximately matches human perception (fig. 6, col. 18, lines 20-30).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 16, Lin et al. discloses the method of claim 1.

Lin et al. **do not discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image.

Gu **discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image (fig. 3d, col. 14, lines 19-33).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 17, Lin et al. discloses the method of claim 3.

Lin et al. **do not disclose** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image.

Gu **discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image (fig. 3d, col. 14, lines 19-33).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 18, Lin et al. discloses the method of claim 7.

Lin et al. **do not disclose** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image.

Gu **discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image (fig. 3d, col. 14, lines 19-33).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 19, Lin et al. discloses the method of claim 8.

Lin et al. **do not disclose** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image.

Gu **discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image (fig. 3d, col. 14, lines 19-33).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 20, Lin et al. discloses the method of claim 9.

Lin et al. **do not disclose** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image

Gu **discloses** wherein after color adjustment, a selected illuminant color temperature correction is applied to digital image data of the color image (fig. 3d, col. 14, lines 19-33).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 25, Lin et al. discloses the method of claim 1.

Lin et al. **do not disclose** wherein a separate look-up table of color temperatures in a three dimensional color space is provided, and temperature corrections for images are identified, and temperature corrections are added to the corrected image data.

Gu **discloses** wherein a separate look-up table of color temperatures in a three dimensional color space is provided, and temperature corrections for images are identified, and temperature corrections are added to the corrected image data (fig. 3, col. 14, lines 19-49).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention for an accurate color match.

Regarding claim 26, Lin et al. discloses the method of claim 22.

Lin et al. **do not disclose** wherein a separate look-up table of color temperatures in an at least two –dimensional color space is provided, and temperature corrections for images are identified, and temperature corrections are added to the corrected image data.

Gu **discloses** wherein a separate look-up table of color temperatures in an at least two –dimensional color space is provided, and temperature corrections for images are identified, and temperature corrections are added to the corrected image data (fig. 3, col. 14, lines 19-49).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention for an accurate color match.

Regarding claim 27, Lin et al. discloses the method of claim 9.

Lin et al. **do not disclose** wherein brightness is computed according to a linear combination of red, green and blue data.

Gu **discloses wherein** brightness is computed according to a linear combination of red, green and blue data (fig. 6, col. 17, lines 39-42).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 28, Lin et al. discloses the method of claim 10.

Lin et al. **do not disclose** wherein brightness is computed according to a linear combination of red, green and blue data.

Gu **discloses** wherein brightness is computed according to a linear combination of red, green and blue data (fig. 6, col. 17, lines 39-42).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Regarding claim 29, Lin et al. discloses the method of claim 11.

Lin et al. **do not disclose** wherein brightness is computed according to a linear combination of red, green and blue data.

Gu **discloses** wherein brightness is computed according to a linear combination of red, green and blue data (fig. 6, col. 17, lines 39-42).

It would have been obvious of one skilled in the art at the time of the invention to modify Lin et al. wherein the automated system may be implemented to provide the color adjustment via automated or user intervention.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanamori (US. 6631209) and Ancin et al. (US. 6038340) are cited to show related art with respect to correcting white and black points in a color correction process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia A Carter whose telephone number is 703 - 306-5433. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tia A Carter
Examiner
Art Unit 2626

TAC
12/10/04

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER